ALCATEL-LUCENT
OmniAccess COMPACT ROUTERS
ENTERPRISE SERVICES ROUTERS

Alcatel-Lucent OmniAccess™ Compact Enterprise Services Routers can offer Metro Ethernet, leased line and LTE communication services in corporate offices, providing maximum reliability, security and intelligence for data and voice applications. Everything is seamlessly integrated with the current VPN service.

5720 ESR

5710 ESR

The Alcatel-Lucent OmniAccess™ 5710 Enterprise Services Routers (ESRs) and Alcatel-Lucent OmniAccess™ 5720 Enterprise Services Routers (ESRs) have multiple WAN options plus optional LTE connectivity. Either interface can be used as a main line, backup link or simultaneous connection. The OmniAccess Compact ESRs also feature a four-port gigabit switch and an IEEE 802.11 a/b/g/n access point. In small and medium-sized branch offices, high connectivity is a key requirement. With the OmniAccess LTE backup, connectivity can be maintained even in the event of disruption of service with the WAN connection.

The rate at which Wireless WANs (WWANs) have evolved means that cellular communications can now be offered at speeds comparable to those provided by land lines. Those speeds, together with low transmission delay (link latency at around 10 ms in commercial LTE networks) and very high stability, satisfy even the most demanding corporate applications: voice and video streaming traffic and business-critical data applications.

Corporate management features are fully supported (SNMPv1/2/3 fully parameterized complying with MIB-2, FTP, TFTP, RADIUS and Syslog), simplifying seamless integration with the company's existing communications management platform.

FEATURES

- Enhanced corporate services
- WAN connectivity
- Advanced security features Integrated VoIP solution
- High-performance WAN
- High-performance WWAN

BENEFITS

- Ensures optimal availability and reliability
- Provides maximum security
- Delivers improved communication over cellular networks

Alcatel·Lucent Enterprise

Table 1 shows the detailed features of the OmniAccess Compact ESRs.

Table 1. OmniAccess Compact ESRs: Detailed features

FUNCTIONS	FEATURES
Enhanced corporate services	• Border router for different dynamic routing domains (RIP, OSPF, BGP), administrative distance in IP routes, route filtering based on maps, and policy-based routing (PBR) enable convergent corporate services that combine WWAN and land-line access • Multi-HSRP and multi-VRRP for network resilience and load balancing applications • Link quality monitoring through the NSM/NSLA system; routing policy based on link quality (RTT, erroneous frame rate and UDP jitter) • QoS application for flow priority, tagging and traffic classification means efficient use of the network resources and an accurate definition of the service level agreements (SLAs)
WAN connectivity	• Independent Gigabit-Ethernet (GigE) 10/100/1000M port for connecting to WAN-Ethernet lines (requires a license) • High processing capacity for maximum performance for Ethernet transmission • Full VLAN support in the GigE port and Fast Ethernet ports (trunking, filtering and QinQ) • Leased line support with E1/T1 and universal serial port (synchronous) (V.35, X.21, V.24) • VDSL2/ADSL2+ WAN over POTS line (available only on the OmniAccess 5710 ESR)
Advanced security features	• Incorporated encryption processor optimizes device performance in scenarios with IPSec tunnels • Fully parameterized IPSec client/server: Advanced IPSec features such as PKI encryption (digital certificates), extended authentication and Reverse-Route Injection (RRI) provide compatibility with other commercial VPN solutions • Latest-generation meshed topology VPNs: Dynamic Multipoint VPN technology • IP filtering, MAC filtering and the SPI firewall protect the router from DoS attacks
Integrated VoIP solution	• Call rerouting over the main VoIP link or through the GSM telephony line enabled in the router's 4G interface • Universal B2B-UA SIP server compatible with Unified Communications and with survival functionality residing in the router itself (does not require IP terminals with survival) • IP switchboard features (IP-PABX): Ring groups, hunt groups, capture groups, double dialing, local message recording, and blind and attended transfers
High-performance WLAN	• Embedded WLAN module (IEEE 802.11 a/b/g/n) with double external antenna connector (2x2 MIMO); activated by license • Configurable Access Point and Client operation modes, either to reroute from the Wi-Fi terminals to the mobile network (access to Internet or to corporate VPN, depending on the service specifications, when operating in Access-Point mode) or to connect the router to the branch Wi-Fi network to access certain applications in the branch (when in Client mode)
High-performance WWAN	• 4G interface fully integrated in the router's internetworking protocol architecture (CIT features), thereby providing high quality and efficient 4G/VPN services • Three backup options for the main 4G service: Through the secondary SIM card, the external USB/4G modem or by connection to an alternative APN (double PDP context; optional) • Improved 4G signal stability in areas with poor WWAN coverage: Up to three SMA ports for external 4G antennas (Rx diversity) • Passive WWAN monitoring mechanisms (making it unnecessary to transmit polling traffic): ¬ Constant monitoring of signal coverage, connection to the mobile network and the IP connection ¬ Detailed monitoring of branch traffic over the WWAN link ¬ Minimize time communications service is unavailable ¬ Audio GSM calls supported simultaneously with 4G data transmission for emergency telephony services

Alcatel-Lucent OmniAccess 5710 and 5720 models

The standard OmniAccess 5710 and 5720 routers have four GigE switched ports and one GigE WAN port. The OmniAccess 5720 also has one slot that supports WAN modules (E1/T1, serial, GigE SFP). The OmniAccess 5710 has one VDSL2/ADSL2+ port. All OmniAccess Compact ESRs have WLAN capability, which can be activated by software license. The WWAN options include 4G-specific services for Verizon, AT&T and global 4G and 3G.

TECHNICAL SPECIFICATIONS

Detailed product features

Ethernet switch

- 10/100/1000Base-T automatic detection
- Duplex/half duplex automatic negotiation
- MDI/MDI-X crossover detection
- Ethernet V2/IEEE 802.3
- LLC (IEEE 802.2), ARP
- IEEE 802.1Q (VLAN)
- IEEE 802.1X
- Managed switch:
  - ¬ EtherLike-MIB (RFC 2665)
  - ¬ SNMP-REPEATER-MIB (RFC 2108)
  - ¬ MAU-MIB (RFC 2668)
- Two status LEDs per port

Synchronous serial interface

- V.35, X.21 or V.24 physical interfaces
- DTE or DCE mode
- Data rates from 64 kHz to 2 Mb/s
- Max MTU 1500 bytes
- HDLC, PPP and Frame Relay encapsulation

E1/T1 link

- Configurable as E1 or T1 operation
- Clear-channel
- Fractional
- HDLC, PPP and Frame Relay encapsulation

WLAN

- IEEE 802.11 a/b/g/n
- Two detachable external antennas (SMA ports)

Wireless-specific features

- Selectable transmission power
- Automatically selected speed
- IEEE 802.11i, WPA and WPA2
- EAP and EAPOL
- Authentication: Open, shared and WPA
- Encryption: AES, TKIP and WEP
- ESSID
- MAC filtering
- QoS: AIFS, CWmin and Cwmax

Embedded 4G

- Automatic handover
- Passive detection of WWAN failure based on monitoring IP traffic in progress
- Active detection of IP/WWAN service degradation based on IP traffic poll: Monitors delay, jitter and packet error rate
- Real-time monitoring of radio parameters
- Local storing of radio statistics for WWAN service evolution reports on console
- Automatic management of operating SIM tray with multiple selection criteria:
  - ¬ Signal level
  - ¬ WWAN technology available in cell: EGPRS or WCDMA
  - ¬ Link quality: Availability, latency, jitter, error rate
  - ¬ Based on time schedule
  - ¬ Dual PDP context (optional)
- 4G firmware remote upgrading (FTP transfer)

IPv4 protocols and features

- IP, ARP and Proxy ARP
- Static IP routing
- RIP I, RIP II, OSPFv2 and BGP-4
- Bidirectional Forwarding Detection (BFD)
- Compatible with HSRP
- RFC 2281 VRRP – Virtual Router Protocol
- Policy routing
- Multi-VRF
- Quality of backup: Routing based on network quality measurements
- Multi-path per IP packet (with static and dynamic routing)
- Weighted balancing per TCP/IP session
- Multicast: IGMP, IGMP-proxy and MOSPF
- DHCP client, server and relay
- NTP client
- DNS client and proxy
- DNS cache
- DNS dynamic updating (RFC 2136)
- DynDNS client
- NAT, PAT, port mapping and NAT exceptions
- PAT firewalling
- Multiple addresses per interface
- Loopback interfaces

Interfaces

- 1 x 10/100/1000M interface GigE, RJ-45F
- 1 x 10/100/1000M interface GigE, SFP
- 1 x synchronous serial: V.35, X.21 or V.24
- 1 x E1/T1 (fractional)
- 4 x 10/100/1000M GigE switch, RJ-45F
- 1x WLAN interface: IEEE 802.11 a/b/g/n with two external antenna ports (optional)
- 1 x embedded interface
  - ¬ LTE
  - ¬ HSPA+
  - ¬ HSPA
  - ¬ UMTS
  - ¬ EDGE
  - ¬ GPRS
- Double connector for external 4G antenna (SMA connectors)
- 1 x USB Host 2.0 interface
- 1 x console port, RJ-45F

Security and VPNs

- IPSec client and server. Fully parameterized, compatible with third-party IPSec peers
- IPSec security services: ESP and AH
- IPSec operation modes: Tunnel and transport
- Encryption: RC4, DES, 3DES and AES
- Authentication: SHA-1 and MD5
- IKE Protocol
- ISAKMP configuration methods: Oakley groups 1, 2, 5 and 15
- NAT-traversal
- RRI
- Digital certificates
  - ¬ X.509v3
  - ¬ LDAP
  - ¬ PKIX
  - ¬ PEM
  - ¬ DER
- SCEP Protocol
- TED Protocol
- IPSec PMTU discovery
- GRE and multi-GRE encryption (GRE RC4)
- NHRP Protocol
- Dynamic Multipoint IPSec VPNs (DMVPN)
- Gateway Encryption Transport VPN (GET VPN - GDOI) (RFC 3547)
- RADIUS Access Control (RFC 2138)
- L2TP client (LAC), L2TP initiation and L2TP server (LNS)
- L2TP/IPSec server compatible with Microsoft clients
- Advanced IP filters
- Advanced Firewall System (AFS)
- Stateful firewall
- Advanced packet classification and marking
- URL and content filtering

QoS

- Packet tagging (DiffServ) based on the interface, subinterface, protocol, port, MAC and size
- Congestion control:
  - ¬ First In First Out (FIFO)
  - ¬ Queue priorities
  - ¬ BRS proprietary system
  - ¬ WFQ
- Low Latency Queuing (LLQ)
- Traffic shaping
  - ¬ Proprietary (over BRS)
  - ¬ ATM traffic shaping
  - ¬ Frame Relay traffic shaping
- Fragmentation in Frame Relay (FRF.12), PPP and MPPP

PPP and PPPoE

- PPP (RFC 1661), PAP/CHAP and IPCP
- Multilink PPP
- Multi-class extension
- Multilink PPP (RFC 2686)
- PPPoE, PPPoE bridge + routing (PPPoE pass-through)
- Multilink PPP over PPPoE
- Renegotiation based on PADT

Bridging

- Bridge over PPP (BCP)
- Spanning Tree Protocol (STP) (IEEE 802.1d)
- Rapid Spanning Tree Protocol (RSTP) (IEEE 802.1w)
- Multiple bridge domains
- Simultaneous bridging and routing
- IEEE 802.1p Class of Service (CoS)
- Per VLAN Spanning Tree Protocol (PVST)
- Source routing, MAC filtering and NetBIOS

Data compression

- X.25 and PPP compression
- IPHC compression
- Van Jacobson and STA LZS compression algorithms

Management

- Command line interface (CLI) on console, Telnet and Secure Shell (SSH)
- SNMP: MIB-2, Private-MIB
- Events logging system
- Netflow V5 and V9
- Syslog client
- NTP
- DynDNS client
- FTP and TFTP software, BIOS and configuration upgrading
- Internal protocol analyzer compatible with Ethereal and WireShark
- Default configuration reset knob
- RADIUS accounting (RFC 2139)

OMNIACCESS 5720 ESR-SPECIFIC FEATURES

- Four integrated switched 10/100/1000-Mb ports
- One integrated WAN 10/100/1000-Mb port
- Wi-Fi option
- LTE option
- One multipurpose slot
- One console
- Dimensions
  - ¬ Height: 4.5 cm (1.77 in.)
  - ¬ Width: 24.5 cm (9.64 in.)
  - ¬ Depth: 21 cm (8.26 in.)
  - ¬ Weight 1.4 Kg (3.08 lb)
- Environmental specifications
  - ¬ Operating temperature: 0 °C to 45 °C (32 °F to 113 °F)
  - ¬ Storage temperature: 10 °C to 70 °C (14 °F to 158 °F)
  - ¬ Humidity (operating): 5% to 80% non-condensing
  - ¬ Humidity (storage): 5% to 90% non-condensing
  - ¬ Power Consumption: 13 Watts

OMNIACCESS 5710 ESR-SPECIFIC FEATURES

- Four integrated switched 10/100/1000-Mb ports
- One integrated WAN 10/100/1000-Mb port
- Wi-Fi option
- LTE option
- One VDSL2/ADSL2+ port
- One console
- Dimensions
  - ¬ Height: 4.8 cm (1.88 in.)
  - ¬ Width: 24.2 cm (9.52 in.)
  - ¬ Depth: 17.9 cm (7.04 in.)
  - ¬ Weight .8 Kg (1.76 lb)
- Environmental specifications
  - ¬ Operating temperature: 0 °C to 45 °C (32 °F to 113 °F)
  - ¬ Storage temperature: 10 °C to 70 °C (14 °F to 158 °F)
  - ¬ Humidity (operating): 5% to 80% non-condensing
  - ¬ Humidity (storage): 5% to 90% non-condensing
  - ¬ Power Consumption: 11 Watts

WAN expansion modules

- One E1/T1 port
- One GigE SFP port
- One serial port

Table 2. OmniAccess Compact ESRs: Ordering information

OA5710V-xx	OA5710V ESR base model has 1xVDSL2/ADSL2+/ADSL2 WAN over POTS, VDSL2 profile 17a, 4 x GigE LAN ports and 1 x GigE WAN port; hardware-ready for 802.11 a/b/g/n (activated by license); see software licenses available; see part number suffix for power cord plug type
OA5710V-4A-US	OA5710V ESR with 4G/LTE and other features for North America (LTE AWS and B17 MIMO, fallback to HSPA+/UMTS 50/AWS/1900/2100 MHz and GPRS); see base model for ports; hardware-ready for 802.11a/b/g/n (activated by license); see software licenses available; see part number suffix for power cord plug type
OA5710V-4V-US	OA5710V ESR with 4G/LTE for Verizon (LTE B13 MIMO, fallback to CDMA 850/1900 MHz and HSPA+/UMTS 850/900/1900/2100 MHz and GPRS); see base model for ports; hardware-ready for 802.11a/b/g/n (activated by license); see software licenses available; see part number suffix for power cord plug type
OA5710V-4G-xx	OA5710V ESR with 4G/LTE for global usage (LTE at 800/900/1800/2100/2600 MHz, fallback to HSPA+/UMTS 900/2100 MHz and EDGE/GPRS 900/1800/1900 MHz); see base model for ports; hardware-ready for 802.11a/b/g/n (activated by license); see software licenses available; see part number suffix for power cord plug type
OA5710V-H+-xx	OA5710V ESR with 3.7G for global usage (HSPA+ at 850/900/1900/2100 MHz, fallback to EDGE/GPRS 850/900/1800/1900 MHz); see base model for ports; hardware- ready for 802.11a/b/g/n (activated by license); see software licenses available; see part number suffix for power cord plug type
OA5720-xx	OA5720 ESR base model has 1 x GigE WAN port, 4 x GigE LAN ports and 1 x MIC slot; hardware- ready for 802.11a/b/g/n (activated by license); see software licenses available; see part number suffix for power cord plug type
OA5720-4A-US	OA5720 ESR with 4G/LTE and other features for North America (LTE AWS and B17 MIMO, fallback to HSPA+/UMTS 850/AWS/1900/2100 MHz and GPRS); see base model for ports; hardware-ready for 802.11a/b/g/n (activated by license); see software licenses available; see part number suffix for power cord plug type
OA5720-4V-US	OA5720 ESR with 4G/LTE for Verizon (LTE B13 MIMO, fallback to CDMA 850/1900 MHz and HSPA+/UMTS 850/900/1900/2100 MHz and GPRS); see base model for ports; hardware-ready for 802.11a/b/g/n (activated by license); see software licenses available; see part number suffix for power cord plug type
OA5720-4G-xx	OA5720 ESR with 4G/LTE for global usage (LTE at 800/900/1800/2100/2600 MHz, fallback to HSPA+/UMTS 900/2100 MHz and EDGE/GPRS 900/1800/1900 MHz);see base model for ports; hardware-ready for 802.11a/b/g/n (activated by license); see software licenses available; see part number suffix for power cord plug type
OA5720-H+-xx	OA5720 ESR with 3.7G for global usage (HSPA+ at 850/900/1900/2100 MHz, fallback to EDGE/GPRS 850/900/1800/1900 MHz); see base model for ports; hardware- ready for 802.11a/b/g/n (activated by license); see software licenses available; see part number suffix for power cord plug type
MODULES	
ESR-MIC-1E1T1	1-port E1/T1 mini interface card for OA5720 ESR compact router
ESR-MIC-1SFP	1-port GigE SFP mini interface card for OA5720 ESR compact router
ESR-MIC-1SS	1-port Sync Serial mini interface card for OA5720 ESR compact router
SOFTWARE	
OA5710-WLAN-SL	WLAN 802.11a/b/g/n AP activation license for OA5710 ESR (all models)
OA5710-ADSV-SL	Advanced IP Services activation license for OA5710 ESR (all models)
OA5720-WLAN-SL	WLAN 802.11a/b/g/n AP activation license for OA5720 ESR compact router

Warranty

Standard hardware warranty

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